

# PATENT COOPERATION TREATY


## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY PCT (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 24 MAY 2005

WIPO

Applicant's or agent's file reference P 03 100 WO		<b>FOR FURTHER ACTION</b>		See Form PCT/PEA/416
International application No. PCT/DK2004/000288		International filing date (day/month/year) 27.04.2004		Priority date (day/month/year) 14.05.2003
International Patent Classification (IPC) or national classification and IPC B65D47/24, B67D5/01				
Applicant KJELDSEN, Lasse				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 8 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand  03.01.2005		Date of completion of this report  25.05.2005		
Name and mailing address of the International preliminary examining authority:   European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer  Martínez Navarro, A.  Telephone No. +31 70 340-2876		



**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/DK2004/000288

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**Box No. I Basis of the report**

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1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-23

as originally filed

**Claims, Numbers**

1-33

received on 02.05.2005 with letter of 02.05.2005

**Drawings, Sheets**

1/14-14/14

as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/DK2004/000288

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	1-33
	No: Claims	

Inventive step (IS)	Yes: Claims	1-33
	No: Claims	

Industrial applicability (IA)	Yes: Claims	1-33
	No: Claims	

**2. Citations and explanations (Rule 70.7):**

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

1 Reference is made to the following document:

D1: WO 02/074651 A (BMF GMBH ; PAETZ WERNER (DE)) 26 September  
2002 (2002-09-26)

2 The document D1 is regarded as being the closest prior art to the subject-matter  
of claim 1, and shows (the references in parentheses applying to this  
document):

Pouring spout (fig. 5) for a container (1) for liquid, said spout comprising:  
outer tubular means (52)  
inner tubular means (61) with an inner passage to facilitate said liquid from the  
container (1) to the exterior,  
said inner tubular means (61) being partly or totally integrated in said outer  
tubular means (52) and said means being movable in relation to each other,  
a stick (7) including closing means (8) at one end for closing or opening said  
inner passage by movement of said outer or inner tubular means in relation to  
each other,  
said stick (7) including closing means (8) being movable from a first defined  
position where said inner passage (fig. 5) is closed to one or more further  
positions at least one of which is defined and at least one of which is a second  
defined position (inner tubular means screwed on the outer tubular means at its  
limit) where said inner passage is open.

3 The subject-matter of claim 1 differs from this known pouring spout in that:

said spout further comprises a movement area of a pin cooperating with each  
other to provide for at least the following principles of usage:  
maintenance of said outer and inner tubular means in relation to each other in  
said first defined position where said inner passage is closed,

maintenance of said outer and inner tubular means in relation to each other in said second defined position where said inner passage is open, and free movement of said outer and inner tubular means in relation to each other at least between said first and second defined positions.

4 The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

5 The problem to be solved by the present invention may be regarded as facilitating the spout use by making faster and easier for the user the opening of the spout by relative movement of both tubular means between the first and the second defined positions.

6 The solution to this problem proposed in claim 1 of the present application, i.e. the use of a pin cooperating with a movement area for maintaining the spout in defined open and closed positions, is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

the existing art teaches that the outer and inner tubular means may be kept in relative defined positions by means of a screwed union between both tubular means. The solution provided by the invention allows a quick opening and closing of the spout by a simple user action. The interaction of pins and complementary movement areas is known, but its application to the particular case of pouring spouts of the type has never been suggested.

7 Claims 2 to 31 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step. Method claim 32 is equivalent to claim 1. Claim 33 relates to the use of the inventive pouring spout of claims 1 to 28.

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## Claims

04.05.2005

(42)

1. Pouring spout (1) for a container for liquid, said spout comprising
- 5 outer tubular means (2)
- inner tubular means (3) with an inner passage (11) to facilitate said liquid from the container to the exterior,
- 10 said inner tubular means (3) being partly or totally integrated in said outer tubular means (2) and said means being movable in relation to each other,
- a stick (4) including closing means (5) at one end for closing or opening said inner passage (11) by movement of said outer or inner tubular means in relation
- 15 to each other,
- said stick (4) including closing means (5) being movable from a first defined position where said inner passage (11) is closed to one or more further positions at least one of which is defined and at least one of which is a second defined
- 20 position where said inner passage (11) is open,
- c h a r a c t e r i z e d   b y
- said spout (1) further comprises a movement area (16) of a pin (15) cooperating
- 25 with each other to provide for at least the following principles of usage:
- maintenance of said outer and inner tubular means in relation to each other in said first defined position where said inner passage (11) is closed,
- 30 maintenance of said outer and inner tubular means in relation to each other in said second defined position where said inner passage (11) is open, and

free movement of said outer and inner tubular means in relation to each other at least between said first and second defined positions.

- 5    2. Pouring spout (1) according to claim 1, characterized by said inner tubular means (3) being connected to the container e.g. by entering into an opening of said container or by surrounding a rim of an opening of said container or by being attached to the edge of the rim of said container.
- 10   3. Pouring spout (1) according to any of claims 1 to 2, characterized by said spout includes a section comprising an opening (8) with a rim for pouring to the exterior, said section being opposite the section comprising an opening (9) into the interior of the container and said openings (8, 9) each defines a beginning of said inner passage (11).
- 15   4. Pouring spout (1) according to claim 3, characterized by said closing means (5) closing and opening at one of said two openings (8, 9).
- 20   5. Pouring spout (1) according to any of claims 1 to 4, characterized by a container connection section (6) comprises sealing means such as O-rings or rims in rubber or rubber-like material.
- 25   6. Pouring spout (1) according to any of claims 1 to 5, characterized by said stick (4) being connected to said outer or inner tubular means (2, 3) with holding or connection means (12, 13) comprising one or more openings.
- 30   7. Pouring spout (1) according to claim 6, characterized by said one or more openings in said holding or connection means (12, 13) being part of said inner passage (11).

8. Pouring spout (1) according to any of claims 1 to 7, characterized by said stick (4) being positioned in the centre of said inner and/or outer tubular means (2, 3) along a centre line (cl) of said inner and/or outer tubular means (2, 3).

5

9. Pouring spout (1) according to any of claims 6 to 8, characterized by said stick (4) transversally being held in place by holding means (12) extending from the inner surface of said inner tubular means, said holding means (12) allowing the stick (4) to move in the longitudinal direction.

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10. Pouring spout (1) according any of claims 1 to 9, characterized by said holding means (12) being at least one ring or similar shaped means connected to said inner surface of said inner tubular means (3) with supporting arms.

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11. Pouring spout (1) according any of claims 1 to 10, characterized by said outer tubular means (2) being movable in the longitudinal direction in relation to said inner tubular means (3) and by a circular movement around said centre line (cl).

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12. Pouring spout (1) according to any of claims 1 to 11, characterized by said movement area (16) being defined by at least one opening included by said outer tubular means (2) and said at least one pin (15) being connected to the outer surface of said inner tubular means (3).

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13. Pouring spout (1) according to any of claims 1 to 11, characterized by said movement area (16) being defined by at least one recess included by said inner tubular means (3) and said at least one pin (15) being connected to the inner surface of said outer tubular means (2).

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14. Pouring spout (1) according to claim 12 or 13, characterized by said movement area (16) comprises at least two openings or recesses being perpendicular or parallel to said centre line (cl).
- 5 15. Pouring spout (1) according to claim 14, characterized by a first and further openings or recesses being perpendicular to each other forming one or more successive S shapes.
- 10 16. Pouring spout (1) according to any of claims 13 to 15, characterized by said movement area comprising a first and third opening or recess being perpendicular to the centreline (cl) and establishing two defined positions for said stick (4) including closing means (5) e.g. an opened and closed position for said inner passage (11).
- 15 17. Pouring spout (1) according to any of claims 13 to 16, characterized by said first and/or third opening or recess comprise at least one bulge (21) securing said at least one pin (15) in one of said defined positions.
- 20 18. Pouring spout according to any of claims 6 to 17, characterized by said stick (4) further comprises at least one controlling rod (22, 25) movable held in one or more of said holding or connection means (12, 13) e.g. sliding in holes penetrating said holding or connection means (12, 13).
- 25 19. Pouring spout according to claim 18, characterized by said at least one controlling rod (22, 25) being positioned between said stick (4) and the inner surface of said inner tubular means (3) e.g. in sets on opposite side of the stick (4).

20. Pouring spout according to any of claims 1 to 19, characterized by said inner and outer tubular means (2, 3) comprise activating means (18-20, 26, 27) such as spring or magnetic means or combinations of the two.

5 21. Pouring spout according to claim 20, characterized by said activating means includes spring activating means (20) acting against an interior surface of said inner and outer tubular means (2, 3), or against an interior surface of said inner tubular means and said holding means, or against an interior surface of said tubular means and said connecting means (13).

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22. Pouring spout according to claim 20 or 21, characterized by said activating means includes spring activating means (20) acting against at least two surfaces of spout such as

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an inner surface of said inner tubular means (2) and an outer surface of said outer tubular means (3),

an outer surface of said inner tubular means (2) and an inner surface of said outer tubular means (3),

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an inner surface of said inner tubular means (2) and an upper surface of said outer tubular means (3),

surfaces of said holding means (12) and said connecting means (13),

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a surface of said material sensible to magnetic fields (27) and an lower surface of said outer tubular means (3),

or surfaces of said sliding holding means (29) and lip or resting points (30).

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23. Pouring spout according to any of claims 20 to 22, characterized by said activating means includes magnetic material (18, 19, 26, 27) in connection with said stick (4) and material (18, 19, 26, 27) sensible to magnetic fields in connection with said inner tubular means (3) or vice versa.
- 5 24. Pouring spout according to any of claims 20 to 23, characterized by said activating means includes magnetic material (18, 19, 26, 27) in connection with said stick (4) and material (18, 19, 26, 27) sensible to magnetic fields in connection with said inner tubular means (3) or vice versa and spring activating means (20) acting against an interior surface of said inner or outer tubular means (2, 3) and a surface of said connection means (13) in order to force said stick (4) including closing means (5) toward a closing position of said inner passage (11).
- 10 25. Pouring spout according to any of claims 1 to 24, characterized by some or all means of the pouring spout such as said inner and outer tubular means (2, 3) being made in a plastic material or any material capable of being moulded, extruded, milled or similarly modified.
- 15 26. Pouring spout according to any of claims 1 to 25, characterized by said closing means (5) being made in a rubber material other similarly flexible material.
- 20 27. Pouring spout according to any of claims 1 to 26, characterized by the surface of said spout comprising an adaptor (7) for holding a normal closing means of the container.
- 25 28. Pouring spout according to claim 27, characterized by said adaptor (7) comprising a rim and a screw thread corresponding to the cap of the container.
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29. Container (10) for containing a liquid being pourable through at least one opening in said container, where said container includes a pouring spout (1) according to any of claims 1 to 28 controlling the pouring of said liquid through said at least one opening.

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30. Container (10) according to claim 29, characterized by said pouring spout (1) being an integrated part of said container or a separate part mounted on said container.

10 31. Container (10) according to claim 29 or 30, characterized by said pouring spout (1) being a separate part mounted on said container with an adapting means (33) in between the spout and the neck or opening of said container for adapting diameters of said spout and neck or opening.

15 32. Method of controlling the liquid pouring from a container with a pouring spout, said method comprising the steps of:

moving an outer or inner tubular means of the pouring spout in relation to each other,

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and hereby

moving a stick including closing means of the pouring spout between at least the following positions

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a first defined position closing the liquid passage of the spout by said closing means being forced against an opening of the liquid passage,

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a second defined position in which the liquid passage of the spout is open by said closing means being held at a distance from said opening of the passage, and

at least one further position allowing said closing means moving freely between said first and second defined position,

5 and providing for maintaining said stick including closing means of the pouring spout in one of said defined positions by providing said pouring spout with a movement area and a pin cooperating with each other.

10 33. Use of a pouring spout according to any of claims 1 to 28 in connection with beverage containers such as bottles containing milk, juice, lemonade, wine, beer or soft drink e.g. drinks comprising carbon dioxide.